

HORSCH et al
Serial No. 10/046,536

Atty Dkt: 4114-2
Art Unit: 2654

REMARKS/ARGUMENTS

Reexamination of the captioned application is respectfully requested.

A. SUMMARY OF THIS AMENDMENT

By the current amendment, Applicants basically:

1. Editorially amend the specification .
2. Editorially amend claims 2, 5, 11, 12, 13, and 19.
3. Add new claims 22 – 26, including new independent claims 22 and 23.
4. Respectfully traverse all prior art rejections.

B. PATENTABILITY OF THE CLAIMS

Claims 1-5, 11, 14-17 and 20 stand rejected under 35 USC 102(b) as being anticipated by the Berkow et al reference. Claims 7-9 stand rejected under 35 USC §103(a) as being unpatentable over the Berkow et al reference in view of the Rabiner et al reference. Claims 10, 13 and 19 stand rejected under 35 USC §103(a) as being unpatentable over the Berkow et al reference in view of the Rabiner et al reference and U.S. Patent Publication 2002/0184373 to Maes. Claims 6, 12, 18 and 21 stand rejected under 35 USC §103(a) as being unpatentable over the Berkow et al reference in view of U.S. Patent Publication 2002/0184373 to Maes. All prior art rejections are respectfully traversed for at least the following reasons.

As an initial matter, it is not entirely clear that Berkow was publicly available before the priority date of the present application. The newsletter authored by Berkow mentions "Winter 1998" in its title bar. However, this purported data can not be considered as definitive evidence that the newsletter was actually published, be it electronically or in any other way, and had become publicly available as of winter 1998. It appears that the Patent Office acquired Berkow instead by a publication that occurred in 2004: please note that the Berkow document forward to applicants has a copyright

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statement that refers to the year 2004. Accordingly, it seems that at least on the Internet the Berkow document has not become available until the year 2004. Applicants therefore submit that the legitimacy of Berkow as a reference is unestablished.

Even if it is assumed *arguendo* that Berkow is a legitimate reference, Berkow does not relate to automatic speech recognition. Rather, Berkow generally relates to audio technology and more specifically to acoustic measurements to assess the acoustic quality of a room or of loudspeakers (as can be gathered from a quick look at the top level domain www.prosoundweb.com). Berkow gives not a single hint relating to the processing of a speech signal in an automatic speech recognition context. It would have involved an inventive step to transfer the technical teaching of Berkow towards the different technical field of automatic speech recognition.

Moreover, there are clear technical differences between the claimed subject matter and the technical approach taught by Berkow. According to the independent claims, the speech signal to be spectrally analyzed is sampled at one (1) of at least two different system sampling rates. The speech signal, which has thus been sampled at a single sample rate, is then spectrally analyzed in a first step up to a first frequency and (in an optional second step) above the first frequency.

In contrast to the claimed approach of sampling the speech signal at a single one of several system sampling rates and analyzing the signal thus sampled in different spectral ranges, Berkow teaches "the use of multiple FFTs at different sampling rates..." (page 1, second paragraph, line 5). In other words, according to the Berkow approach audio signal portions sampled at different sampling rates are analyzed in different spectral ranges. According to the claimed approach speech, on the other hand, signal portions that have been sampled at a common sampling rate are analyzed in different spectral ranges.

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These differences are quite important for the claimed subject matter as it facilitates provision of a compatible set of acoustic parameters for all different system sampling rates. This compatible set of acoustic parameters is generated by the first spectral analyzer which independently from the sampling rate, i.e. even for the lowest sampling rate, always parametrizes an identical spectral range up to the first frequency (see page 5, line 13 to page 6, line 2 of applicants' specification).

The foregoing distinctions are evident in all pending independent claims. Moreover, newly added independent claim 22 stresses the distinctions yet further by requiring that the first spectral analyzer analyze, up to a first frequency, the speech signal sampled at the selected sampling rate; and that the second spectral analyzer analyze, at least above the first frequency, the same speech signal sampled at the selected sampling rate.

New independent claim 23 essentially includes the speech analyzing stage limitations of new independent claim 22, and further requires that its recognition stage having a single pattern matching unit which serves the plural spectral analyzers. For support, *see*, e.g., the paragraph bridging pages 12 and 13 of the specification. New dependent claim 24 requires that the number of spectral analyzers of claim 23 equal a number of different system sampling rates (*see*, e.g., the first full sentence on page 13 of the specification for an example of support). New dependent claim 25 specifies that at least one of the spectral analyzers is situated in a terminal and the recognition stage is located in a remote network server (*see*, e.g., the embodiment of Fig. 4 and Fig. 5 for support). New dependent claim 26 further describes the speech analyzing stage of the claim 25 network system, and is supported e.g., by Fig. 5 and the specification discussion beginning, e.g., on page 16, line 20+.

Features of the new claims are not taught or suggested in the applied references.

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C. MISCELLANEOUS

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

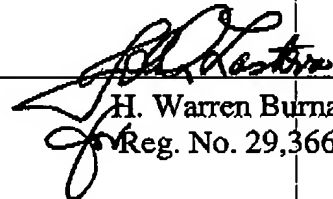
The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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